Title: **Study of the Photoreaction Mechanisms of Photoactivatable Compounds**

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Abstract.

Recent investigations of photochemists have focused on the mechanistic design, synthesis and study of photoreleasable protecting groups. The overall goal is to create a suite of protecting groups whose release can be triggered using inexpensive light sources. The development of new photoactivatable moiety responds to the current search for a new methodology for biological and other applications. The development of the photoremovable protecting group also brings a new strategy in organic synthesis. The aim of my work was to study the mechanisms of new types of photoreactions using fast kinetic techniques, such as laser flash spectroscopy. Femtosecond and nanosecond time-resolved spectroscopy, which have been used together with theoretical calculations to detect the reaction intermediates, will be introduced in my presentation.